



Sequence Listing

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<120> Humanized Anti-ErbB2 Antibodies and Treatment with
Anti-ErbB2 Antibodies

<130> P1467R2

<141> 2000-06-23

<150> US 60/141,316

<151> 1999-06-25

<160> 13

<210> 1

<211> 107

<212> PRT

<213> Mus Musculus

<400> 1

Asp Thr Val Met Thr Gln Ser His Lys Ile Met Ser Thr Ser Val
1 5 10 15

Gly Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser
20 25 30

Ile Gly Val Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Lys
35 40 45

Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Asp
50 55 60

Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
65 70 75

Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
80 85 90

Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gly Thr Lys Leu Glu
95 100 105

Ile Lys

<210> 2

<211> 119

<212> PRT

<213> Mus musculus

<400> 2

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly
1 5 10 15

Thr Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr
 20 25 30
 Asp Tyr Thr Met Asp Trp Val Lys Gln Ser His Gly Lys Ser Leu
 35 40 45
 Glu Trp Ile Gly Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr
 50 55 60
 Asn Gln Arg Phe Lys Gly Lys Ala Ser Leu Thr Val Asp Arg Ser
 65 70 75
 Ser Arg Ile Val Tyr Met Glu Leu Arg Ser Leu Thr Phe Glu Asp
 80 85 90
 Thr Ala Val Tyr Tyr Cys Ala Arg Asn Leu Gly Pro Ser Phe Tyr
 95 100 105
 Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
 110 115

<210> 3
 <211> 107
 <212> PRT
 <213> Artificial sequence

<220>
 <223> humanized VL sequence

<400> 3
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
 1 5 10 15
 Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser
 20 25 30
 Ile Gly Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
 35 40 45
 Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
 65 70 75
 Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
 80 85 90
 Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu
 95 100 105

Ile Lys

<210> 4
 <211> 119
 <212> PRT
 <213> Artificial sequence

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<220>

<223> Humanized VH sequence

<400> 4

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly
1				5					10					15
Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Thr
				20					25					30
Asp	Tyr	Thr	Met	Asp	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu
				35					40					45
Glu	Trp	Val	Ala	Asp	Val	Asn	Pro	Asn	Ser	Gly	Gly	Ser	Ile	Tyr
				50					55					60
Asn	Gln	Arg	Phe	Lys	Gly	Arg	Phe	Thr	Leu	Ser	Val	Asp	Arg	Ser
				65					70					75
Lys	Asn	Thr	Leu	Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp
				80					85					90
Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Asn	Leu	Gly	Pro	Ser	Phe	Tyr
				95					100					105
Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	
				110					115					

<210> 5

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> light chain consensus sequence

<400> 5

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val
1				5					10					15
Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Ser
				20					25					30
Asn	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys
				35					40					45
Leu	Leu	Ile	Tyr	Ala	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val	Pro	Ser
				50					55					60
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile
				65					70					75
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
				80					85					90
Tyr	Asn	Ser	Leu	Pro	Trp	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu
				95					100					105

Al
u

Ile Lys

<210> 6

<211> 119

<212> PRT

<213> Artificial sequence

<220>

<223> heavy chain consensus sequence

<400> 6

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
1 5 10 15

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser
20 25 30

Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
35 40 45

Glu Trp Val Ala Val Ile Ser Gly Asp Gly Gly Ser Thr Tyr Tyr
50 55 60

Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
65 70 75

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
80 85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Gly Arg Val Gly Tyr Ser Leu
95 100 105

Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
110 115

<210> 7

<211> 10

<212> PRT

<213> Mus musculus

<220>

<221> unsure

<222> 10

<223> unknown amino acid

<400> 7

Gly Phe Thr Phe Thr Asp Tyr Thr Met Xaa
1 5 10

<210> 8

<211> 17

<212> PRT

<213> Mus musculus

<400> 8

Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr Asn Gln Arg Phe
1 5 10 15

Lys Gly

<210> 9
<211> 10
<212> PRT
<213> Mus musculus

<400> 9
Asn Leu Gly Pro Ser Phe Tyr Phe Asp Tyr
1 5 10

<210> 10
<211> 11
<212> PRT
<213> Mus musculus

<400> 10
Lys Ala Ser Gln Asp Val Ser Ile Gly Val Ala
1 5 10

<210> 11
<211> 7
<212> PRT
<213> Mus musculus

<220>
<221> unsure
<222> 5-7
<223> unknown amino acid

<400> 11
Ser Ala Ser Tyr Xaa Xaa Xaa
1 5

<210> 12
<211> 9
<212> PRT
<213> Mus musculus

<400> 12
Gln Gln Tyr Tyr Ile Tyr Pro Tyr Thr
1 5

<210> 13
<211> 645
<212> PRT
<213> Homo sapiens

<400> 13
Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu
1 5 10 15

Leu Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp
20 25 30

Met Lys Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met
35 40 45

Leu Arg His Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu
 50 55 60
 Glu Leu Thr Tyr Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln
 65 70 75
 Asp Ile Gln Glu Val Gln Gly Tyr Val Leu Ile Ala His Asn Gln
 80 85 90
 Val Arg Gln Val Pro Leu Gln Arg Leu Arg Ile Val Arg Gly Thr
 95 100 105
 Gln Leu Phe Glu Asp Asn Tyr Ala Leu Ala Val Leu Asp Asn Gly
 110 115 120
 Asp Pro Leu Asn Asn Thr Thr Pro Val Thr Gly Ala Ser Pro Gly
 125 130 135
 Gly Leu Arg Glu Leu Gln Leu Arg Ser Leu Thr Glu Ile Leu Lys
 140 145 150
 Gly Gly Val Leu Ile Gln Arg Asn Pro Gln Leu Cys Tyr Gln Asp
 155 160 165
 Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn Asn Gln Leu Ala
 170 175 180
 Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys His Pro Cys
 185 190 195
 Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Ser Glu
 200 205 210
 Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys Ala
 215 220 225
 Arg Cys Lys Gly Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys
 230 235 240
 Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys
 245 250 255
 Leu His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala
 260 265 270
 Leu Val Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro
 275 280 285
 Glu Gly Arg Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro
 290 295 300
 Tyr Asn Tyr Leu Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys
 305 310 315
 Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp Gly Thr Gln Arg
 320 325 330

Cys	Glu	Lys	Cys	Ser	Lys	Pro	Cys	Ala	Arg	Val	Cys	Tyr	Gly	Leu	335	340	345
Gly	Met	Glu	His	Leu	Arg	Glu	Val	Arg	Ala	Val	Thr	Ser	Ala	Asn	350	355	360
Ile	Gln	Glu	Phe	Ala	Gly	Cys	Lys	Lys	Ile	Phe	Gly	Ser	Leu	Ala	365	370	375
Phe	Leu	Pro	Glu	Ser	Phe	Asp	Gly	Asp	Pro	Ala	Ser	Asn	Thr	Ala	380	385	390
Pro	Leu	Gln	Pro	Glu	Gln	Leu	Gln	Val	Phe	Glu	Thr	Leu	Glu	Glu	395	400	405
Ile	Thr	Gly	Tyr	Leu	Tyr	Ile	Ser	Ala	Trp	Pro	Asp	Ser	Leu	Pro	410	415	420
Asp	Leu	Ser	Val	Phe	Gln	Asn	Leu	Gln	Val	Ile	Arg	Gly	Arg	Ile	425	430	435
Leu	His	Asn	Gly	Ala	Tyr	Ser	Leu	Thr	Leu	Gln	Gly	Leu	Gly	Ile	440	445	450
Ser	Trp	Leu	Gly	Leu	Arg	Ser	Leu	Arg	Glu	Leu	Gly	Ser	Gly	Leu	455	460	465
Ala	Leu	Ile	His	His	Asn	Thr	His	Leu	Cys	Phe	Val	His	Thr	Val	470	475	480
Pro	Trp	Asp	Gln	Leu	Phe	Arg	Asn	Pro	His	Gln	Ala	Leu	Leu	His	485	490	495
Thr	Ala	Asn	Arg	Pro	Glu	Asp	Glu	Cys	Val	Gly	Glu	Gly	Leu	Ala	500	505	510
Cys	His	Gln	Leu	Cys	Ala	Arg	Gly	His	Cys	Trp	Gly	Pro	Gly	Pro	515	520	525
Thr	Gln	Cys	Val	Asn	Cys	Ser	Gln	Phe	Leu	Arg	Gly	Gln	Glu	Cys	530	535	540
Val	Glu	Glu	Cys	Arg	Val	Leu	Gln	Gly	Leu	Pro	Arg	Glu	Tyr	Val	545	550	555
Asn	Ala	Arg	His	Cys	Leu	Pro	Cys	His	Pro	Glu	Cys	Gln	Pro	Gln	560	565	570
Asn	Gly	Ser	Val	Thr	Cys	Phe	Gly	Pro	Glu	Ala	Asp	Gln	Cys	Val	575	580	585
Ala	Cys	Ala	His	Tyr	Lys	Asp	Pro	Pro	Phe	Cys	Val	Ala	Arg	Cys	590	595	600
Pro	Ser	Gly	Val	Lys	Pro	Asp	Leu	Ser	Tyr	Met	Pro	Ile	Trp	Lys	605	610	615

Phe Pro Asp Glu Glu Gly Ala Cys Gln Pro Cys Pro Ile Asn Cys
620 625 630

Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro Ala Glu
635 640 645
